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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/735,401	12/12/2000	Eckhard Alt	IFD/046	4641
490	7590	11/22/2004	EXAMINER	
VIDAS, ARRETT & STEINKRAUS, P.A. 6109 BLUE CIRCLE DRIVE SUITE 2000 MINNETONKA, MN 55343-9185			THALER, MICHAEL H	
			ART UNIT	PAPER NUMBER
			3731	
DATE MAILED: 11/22/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/735,401	ALT, ECKHARD	
	<b>Examiner</b>	<b>Art Unit</b>	
	Michael Thaler	3731	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) ☒ Responsive to communication(s) filed on 19 October 2004.

2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4) ☒ Claim(s) 61,64,65 and 68-87 is/are pending in the application.

4a) Of the above claim(s) 83 and 84 is/are withdrawn from consideration.

5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.

6) ☒ Claim(s) 61,64,65,68-82 and 85-87 is/are rejected.

7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.

8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \*    c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.

3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____	6) <input type="checkbox"/> Other: _____

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A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on Oct. 19, 2004 has been entered.

Claims 83 and 84 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claims 61, 64, 65 and 68-82 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. There is no basis in the original disclosure for the limitation in claim 61, line 4 and claim 65, lines 5-6 that the first portion is located further from the longitudinal axis of the stent than the second portion. The thickness of the stent struts is less than their width as indicated on page 28, lines 7-11 of the specification. Further,

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the thickness of the stent struts is defined as being measured along the radius of the stent as indicated on page 28, lines 10-11. Thus, according to the original disclosure, the long dimension of the oval shape shown in figure 5B and the shape shown in figure 5C is along the circumference of the stent. Thus, there is no basis in the original disclosure for the limitation that the first portion (one of the wide portions in figure 5C) is located further from the longitudinal axis of the stent than the second portion (the other wide portion in figure 5C).

Claims 61, 64, 65 and 68-82 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 61 and 65 are confusing and inaccurate for the reasons set forth in the paragraph above. As to claim 76, lines 1-2, "further comprising a plurality of serpentine bands" is indefinite since the struts which form the serpentine bands have already been claimed in claim 65, resulting in a double recitation of the same element.

Claim 61 is rejected under 35 U.S.C. 102(e) as being anticipated by Johnson (5,449,384). Johnson, in figure 15, discloses a stent 622 (noting that the frame of the valve is disclosed as being a "stent" in view of the phrase "stent or

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frame" in col. 1, lines 13-15) having struts (noting struts 210, 212 and 214 of the figure 3 embodiment and the statement that the frame of the figure 15 embodiment is similar to the frame of the figure 3 embodiment in col. 5, lines 32-35) with a first portion (the left portion of the H-shape shown in figure 15), a second portion (the right portion of the H-shape), and a middle portion therebetween (the cross-member of the H-shape), the middle portion being narrower than the first portion and the second portion in cross-section.

Claims 64, 65, 68-73, 76-80, 86 and 87 are rejected under 35 U.S.C. 103(a) as being unpatentable over Andersen et al. (6,582,462) in view of Johnson (5,449,384). Andersen et al. disclose a stent 1 having struts (wires 2, 3). Andersen et al. fail to disclose the struts having a first portion, a second portion, and a middle portion therebetween, the middle portion being narrower than the first portion and the second portion in cross-section. However, Johnson teaches that the struts 622 of a stent which holds a valve prosthesis should have this shape (figure 15) in order to obtain the advantage of better securing the aortic wall material to the stent by tucking the aortic wall material into the grooves of the struts (col. 5, lines 29-39). It would have been obvious to so shape the Andersen et al. struts so that it too would have this advantage. As to claim

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64, the Andersen et al. struts 2, 3 have a serpentine configuration as claimed. As to claim 65, the Andersen et al. stent 1 comprises an open ended tube as claimed. As to claim 71, Andersen et al. disclose connectors (the sutures described in col. 5, lines 19-22). As to claim 72, the Andersen et al. stent 1 has a taper (e.g. at each loop 4 which tapers since its width decreases as one follows it from the bottom to the top as seen in figure 1).

Claims 74, 75, 81 and 82 are rejected under 35 U.S.C. 103(a) as being unpatentable over Andersen et al. (6,582,462) in view of Johnson (5,449,384) as applied to claims 64, 65, 68-73, 76-80, 86 and 87 above, and further in view of Marin et al. (5,397,355). Andersen et al. fail to disclose the claimed taper. However, it is well known in this art to provide a taper the exterior surface of stents. For example, Marin et al. teach that the outer diameter of a stent should have a taper (at 18) in order to anchor the stent within the blood vessel and also facilitate smooth passage within a blood vessel when barbs 18 are unexpanded. It would have been obvious to include a taper in the Andersen et al. stent (i.e. barbs which form a taper in the stent) so that it too would have this advantage.

Claim 85 is rejected under 35 U.S.C. 102(a) as being anticipated by Pulnev et al. (WO95/17859). Pulnev et al., in

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figure 3, disclose an unexpanded stent formed from an open ended tube (noting that the ends of the stent are open since the sections 5 are arranged in a ring at each end of the stent with an opening within the ring) having a wall with a multiplicity of holes formed therethrough, the tubular wall defined by a plurality of struts 1, the stent tapering from the midpoint to each end of the stent at a substantially constant slope (since the change in slope is small) in relation to the longitudinal axis.

Claim 85 is rejected under 35 U.S.C. 102(b) as being anticipated by Savin et al. (4,950,227). Savin et al., in figure 5, disclose an unexpanded stent 16 (The stent is unexpanded since it is not expanded to the condition shown in figure 6. Further, the term "unexpanded" is a product by process limitation. The patentability of a product does not depend on its method of production. If the product in a product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the product was made by a different process (M.P.E.P. 2113). In this case, the stent, as claimed, is certainly the same as or obvious from the stent shown in figure 5 of Savin et al.) formed from an open ended tube having a wall with a multiplicity of holes formed therethrough, the tubular wall defined by a

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plurality of struts, the stent tapering from the midpoint to each end of the stent at a substantially constant slope in relation to the longitudinal axis (as seen in figure 5).

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Pulnev et al. (6,007,574) is an English language equivalent to Pulnev et al. (WO95/17859).

Applicant's arguments filed Oct. 19, 2004 have been fully considered but they are not persuasive for the reasons set forth above.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Thaler whose telephone number is (703) 308-2981. The examiner can normally be reached Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anhtuan T. Nguyen can be reached on (703)308-2154. The fax phone number for the organization where this application or proceeding is assigned is (703)872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0858.



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mht

11/17/04

A handwritten signature in black ink, appearing to read 'Michael Thaler', written in a cursive style.

MICHAEL THALER  
PRIMARY EXAMINER  
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